Chapter 3 Study Guide Name:

Write f(x) in the form f(x)=ax2+bx+c and identify the leading coefficient.

1. f(x)= 2(x-1)2 +10
2. f(x)=1/2(x+4)2-5
3. f(x)= -3(x+5)2+1
4. f(x)= -3/2(x-2)2+4

Find the vertex of each:

1. f(x)= x2-12x+32
2. f(x)= 2x2+10x+8
3. f(x)=x2+4x-5
4. f(x)=1/3x2+x+1
5. f(x)=2x2-8x-1

Solve the following using a method of your choice. Show your work.

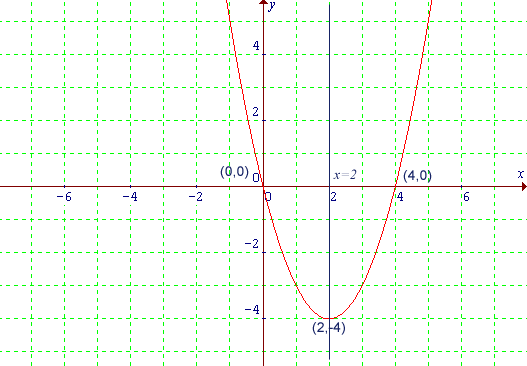
1. 3x2-10x+2=0
2. 4x2-12x+1=0
3. 12x2+10x-4=0
4. x2-2x=10
5. x2-8x=2
6. x2-6x=7

Use the discriminant to find out how many real solutions each equation has.

1. x2-10x+20=0
2. 5x2-3x+1=0
3. 7x2+11x-1=0

Solve the inequality. Write each solution set.

1. x2-10x-24<0
2. 4x2-12x+5>0
3. 4x2 - 22x + 28 < 0

Use the graph to sketch a graph of each item listed below. Please also write the equation for item below. They do not have to be simplified. The equation shown is f(x)= x2-4x

1. f(x)+1
2. f(x-1)
3. f(2x)-1
4. –f(x)